

Chapter 6

Glossary and Acronyms

Access road – Roads and road spurs that provide vehicular access to the corridor and structure sites. Where county roads, logging roads, driveways or other access is already established, access roads are built as short spurs to the structure site. Access roads are maintained even after construction except for temporary access roads. Temporary access roads are laid down on geotextile in sensitive areas such as wetlands or yards, so that they can be removed after use and the site restored.

Alluvial – Deposited by flowing water, as *alluvial* sediment.

Ambient noise – Noise within the surrounding area from sources such as a substation or road use, that are part of the background noise level.

APE – Area of Potential Effects, as used in Section 106 of the National Historic Preservation Act is the geographic area within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties.

Aquifer – Water-bearing rock or sediments below the surface of the earth.

AWQC – Ambient water quality criteria are elements of state water quality standards, expressed as constituent concentrations representing a quality of water that supports a particular use. When criteria are met, water quality will generally protect the designated use.

BMP – Best Management Practices, a practice or combination of practices that are the most effective and practical means of preventing or reducing the amount of pollution generated by non-point sources to a level compatible with water quality goals.

BPA – Bonneville Power Administration.

Capacity – A measure of the ability of a transmission line, groups of lines (path) or transmission system to carry electricity.

Carbon Monoxide (CO) – Colorless, odorless, poisonous gas produced when carbon burns with insufficient air.

Chronic – Of long duration or frequent occurrence.

Clean Water Act – A Federal law intended to restore and maintain the chemical, physical, and biological integrity of the nation's waters and secure water quality.

Colluvium – Soil material, rock fragments, or both accumulated at the base of steep slopes.

Conductor – The wire cable strung between transmission towers through which electric current flows.

Corona – Corona occurs in regions of high electric field strength on conductors, insulators, and hardware when sufficient energy is imparted to charged particles to cause ionization (molecular breakdown) of the air.

Culvert – A corrugated metal or concrete pipe used to carry or divert runoff water from a drainage such as a ditch or stream; usually installed under roads to prevent washouts and erosion.

Cultural Resources – Those historic and archeological properties, properties of traditional and cultural significance, sacred sites, Native American human remains and associated objects, and cultural landscapes which are entitled to special consideration under Federal statute, regulations, and/or executive orders.

Cumulative Impacts – impacts created by the incremental effect of a specific action when added to other past, present, or reasonably foreseeable actions.

Current – The amount of electrical charge flowing through a conductor (as compared to voltage, which is the force that drives the electrical charge).

Danger trees – Trees (or high-growing brush) in or alongside the right-of-way, which are hazardous to the transmission line. These trees are identified by special crews and must be removed to prevent tree-fall into the line or other interference with the wires. BPA's Construction Clearing Policy requires that trees be removed that meet either one of two technical categories: Category A is any tree that within 15 years will grow to within about 18 feet of conductors when the conductor is at maximum sag (212°F) and swung by 6 lb per sq feet of wind (58 mph); Category B is any tree or high-growing brush that after a year of growth will fall within about 8 feet of the conductor at maximum sag (176°F) and in a static position.

dBA – The first two letters (dB) are an abbreviation for “decibel,” the unit in which sound is most commonly measured. The last letter (A) is an abbreviation for the scale (A scale) on which the sound measurements were made. A decibel is a unit for expressing relative difference in power, usually between acoustic signals, equal to 10 times the common logarithm of the ratio of two levels.

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DNR – State of Washington, Department of Natural Resources.

Double outage – Simultaneous loss of two transmission lines that are on the same right-of-way, on the same structure, or are separated by 1,200 feet or less.

Drain dips – Dips in secondary roads to reduce road surface and fill slope erosion by intercepting storm and seasonal runoff and diverting it to a safe disposal area.

Drift – A collective term for all the rock, sand, and clay that is transported and deposited by a glacier either as till or outwash.

EA – Environmental Assessment; an environmental document prepared by Federal agencies under the National Environmental Policy Act to determine whether the proposed action has the potential to cause significant environmental effects.

Easement – A grant of certain rights to the use of a piece of land BPA acquires easements for many of its transmission facilities, includes the right to enter the right-of-way to build, maintain, and repair the facilities, and for the use, improvement, or construction of access roads. Permission for these activities are included in the negotiation process for acquiring easements over private land.

Electric and magnetic fields (EMF) – The two kinds of fields produced around the electric wire or conductor when an electric transmission line or any electric wiring is in operation.

Electromagnetic interference (EMI) – Interference caused by corona (See corona).

Electromagnetic noise – The noise generated in the frequency bands used for radio and television signals caused by corona on transmission line conductors.

Emergent Wetland–Wetlands dominated by herbaceous species.

EPA – Environmental Protection Agency.

Equivalent sound level (L_{eq}) – Generally accepted as the average sound level.

Exceedence levels (L levels) – Refers to the A-weighted sound level that is exceeded for a specified percentage of the time during a specified period.

FAA – Federal Aviation Administration.

FCC – Federal Communications Commission.

Fecal coliform – Bacteria found in the intestinal tracts of birds and mammals that can be passed to the environment via fecal matter.

FEMA – Federal Emergency Management Agency; produces flood insurance maps used to determine the location of floodplains.

Fiber optic cable – Special wire installed on the transmission line that is used for communication between one location and another.

Floodplain – That portion of a river valley adjacent to the stream channel that is covered with water when the stream overflows its banks during flood stage.

Forested Wetland – A wetland with a tree canopy

Generation – The power that is produced through some type of power plant.

Glacial outwash – Materials deposited by glacial meltwaters.

Glaciofluvial – Used of sediments transported by ice and deposited from the flowing meltwaters of a glacier.

H-Frame – Refers to a type of transmission line structure usually made of wood, with vertical poles and horizontal crossarms. When erected, it resembles a capital letter “H.”

Insulators – A ceramic or other non-conducting material used to keep electrical circuits from jumping over to ground.

Intermittent –Creeks or streams with seasonal or periodic water flow; under the Washington state water typing classifications, Type 5 streams are intermittent.

Kilovolt (kV) – One thousand volts.

Lattice steel – Refers to a transmission tower constructed of multiple steel members that are connected together to make up the frame.

Load – The amount of electric power or energy delivered or required at any specified point or points on a system. Load originates primarily at the energy-consuming equipment of customers.

Low-income population– Low-income population means any readily identifiable group of low-income persons who live in geographic proximity who would be affected by the Proposed Action, policy or activity. Low-income is generally defined as a household income at or below the US Department of Health and Human Services poverty guidelines. The guidelines establish poverty thresholds on an annual basis; the poverty threshold for 2001 was \$11,559 for a 2-person household in the contiguous United States. However, other thresholds may be used as appropriate.

Mbf – Thousand board feet; a way to measure amount of lumber.

mG – Milligauss – A unit used to measure magnetic field strength. One-thousandth of a gauss.

Minority population – Minority population means any readily identifiable groups of minority persons who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans who will be similarly affected by a proposed program, policy or activity. A minority population is considered to be present if the minority population percentage of the affected area is greater than the minority population percentage in the general population or other appropriate unit of geographic analysis (census tracts are generally considered appropriate). Guidance from the U.S. Council on Environmental Quality (CEQ) states that “minority populations should be identified where either (a) the minority population of the affected area exceeds 50 percent or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis” (CEQ, 1998).

Mitigation – Steps or measures taken to lessen the potential effects predicted for a resource. They may include reducing the impact, avoiding it completely, or compensating for the impact. Some mitigation, such as adjusting the location, of a tower to avoid a special resource, is taken during the design and location process. Other mitigation, may be done during construction, such as measures to reduce noise, or after construction, such as reseeding access roads with desirable grasses in order to help prevent the proliferation of weeds.

Multiplier Effects – The total increase in income and employment that occurs in the local economy for each dollar of local project expenditure.

NAAQS – National Ambient Air Quality Standards.

National Environmental Policy Act (NEPA) – A law passed in 1969 that requires Federal agencies to assess the impacts that their actions may have on the environment.

NESC – National Electrical Safety Code

NHPA – National Historic Preservation Act.

Non-lustrous – Non-reflecting conductor made of metal with a dull finish

Noxious weeds – Plants that are injurious to public health, crops, livestock, land or other property, as identified by state law.

NRHP – National Register of Historic Places.

100-year floodplain – Areas that have a 1 percent chance of being flooded in a given year, designated by FEMA. (See Floodplain.)

OAHP – Office of Archeology and Historic Preservation.

Open water – Water covers the surface at a mean annual depth greater than 6.6 feet or, if less than 6.6 feet in depth, the habitat does not support rooted plant species.

ORCAA – Olympic Region Clean Air Agency.

Outage – Events caused by a disturbance on the electrical system, that requires BPA to remove a piece of equipment or a portion or all of a line from service. The disturbances can be either natural or human-caused.

Overloaded – Too much current trying to flow over transmission facilities. Equipment has safeguards: in the event of overloading of the system, switches will disconnect sensitive equipment from the flow of electricity.

Ozone – A form of oxygen, O₃, produced when an electric spark or ultraviolet light passes through air or oxygen.

Palustrine – A term used to classify wetlands; includes freshwater wetlands vegetated with plants and wetlands that occur in tidal areas where salinity due to ocean-derived salts is below 0.5 parts per thousand.

Per capita income – Total personal income divided by population.

Perennial – Refers to a stream or creek with continuous, year-round water flow; under the state water typing system includes Type 1-4 streams. When this term refers to plants, it means species that live for several years.

Permanently Flooded – An area where water covers the land surface throughout the year in all years.

Personal income – Labor earnings (proprietors income & wages and salaries); dividends, interest, and rent; and transfer payments.

PM10 – Particulate matter having a nominal aerodynamic diameter less than or equal to 10 microns.

Respirable – Easily inhaled.

Right-of-way (ROW) – An easement for a certain purpose over the land of another, such as a strip of land used for a road, electric transmission line, pipeline, etc.

Riparian – Pertaining to, living on, or situated on the banks of rivers and streams.

Safety – The state of being safe from the risk of experiencing or causing injury, danger, or loss.

Scrub-shrub – Includes areas dominated by woody vegetation less than 6 m (20 feet) tall. The species include true shrubs, young trees (saplings), and trees or shrubs that are small or stunted because of environmental conditions.

Seasonally flooded – Surface water is present for extended periods especially early in the growing season, but is absent by the end of the growing season in most years. The water table after flooding ceases is variable, extending from saturated to the surface to a water table well below the ground surface.

Semi-permanently flooded – Surface water persists throughout the growing season in most years. When surface water is absent, the water table is usually at or very near the land's surface.

Sheet erosion – Removal of a uniform, thin layer of soil by raindrops or water runoff on bare soil.

SHPO – State Historic Preservation Office.

Silvicultural – Concerning the cultivation and management of trees to establish or maintain age structures, species composition, and growth rates that contribute to forest management goals. This may include planting, thinning and selective cutting, and clear-cutting, often of single-species plantations.

Single-circuit – A line with one electrical circuit on the same tower.

Sole source aquifer – An aquifer designated by the Environmental Protection Agency which provides at least half of an area's drinking water.

Staging area – The area cleared and used by BPA/BPA's contractor to store and assemble materials or structures.

STP – Shovel test probes; are the hole dug and process undertaken to conduct subsurface cultural resource investigations.

Structure – Refers to a type of support used to hold up transmission or substation equipment.

Substation – The fenced site that contains the terminal switching and transformation equipment needed at the end of a transmission line.

Successional – Refers to the gradual process of progressive change and replacement of ecological communities at a particular site over time. Age and structure of successional forest categories vary significantly by forest type and from one biogeoclimatic zone to another.

Early-successional – Early-successional stands typically comprise herbaceous plants, shrubs, seedlings, saplings, and small trees, including many shade-intolerant species.

Mid-successional – Typically includes stands of medium-sized pole and saw timber. Understories begin to open up as lower-growing species are shaded out.

Late-successional – Typically includes stands of larger trees (at least 24 inches in diameter at breast height), multi-layered canopies, downed logs, and standing dead trees (snags). Heavily shaded understories are more open but include shade-tolerant shrubs and herbaceous species.

System reliability – The ability of a power system to provide uninterrupted service, even while that system is under stress.

Take – Section 3 of the Endangered Species Act defines take as an act to a listed species with the effect “to harass, harm, pursue, hunt, shoot, wound, trap, capture, collect or attempt to engage in any such conduct.” The USFWS further defines “harm” as “significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavior patterns such as breeding, feeding, or sheltering,” and “harass” as “actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to breeding, feeding or sheltering.”

Temporarily flooded – An upland or wetland area where surface water is present for brief periods during growing season, but the water table usually lies well below the soil surface.

Terrace – A flat, often narrow remnant of an old floodplain, which stands above a stream that has eroded its bed down to a new floodplain.

Thermal rating – The maximum current that can flow in a transmission line conductor, device or electrical machine without a failure or damage caused by excessive temperature.

THPO – Tribal Historic Preservation Officer is the tribal official appointed by the tribe’s chief governing authority or designated by ordinance or preservation program who has assumed the responsibilities of the State Historic Preservation Officer for purposes of Section 106 compliance on tribal lands in accordance with National Historic Preservation Act regulations

Threatened species – Species officially designated by the US Fish and Wildlife Service that are likely to become endangered within the foreseeable future throughout all or a significant portion of their range; states also designate threatened species.

Transmission line – The structures, insulators, conductors, and other equipment used to transmit electrical power from one point to another.

TSP – Total suspended particulate; a measure of water turbidity.

Turbidity – A measure of the amount of particulate matter, such as suspended sediment, per unit volume of water.

USFWS – U.S. Fish and Wildlife Service.

Vegetation management – BPA’s policies and protocols that guide methods of controlling vegetation within and near electric power facilities. Vegetation that is controlled includes tall-growing species that pose a hazard to power lines, as well as noxious weeds. It also includes methods to encourage the growth of low-growing, desirable species that resist noxious weed invasion.

Water bars – Smooth, shallow ditches excavated at an angle across a road to decrease water velocity and divert water off and away from the road surface.

Watershed – A drainage basin defined by an elevated boundary area separating tributaries draining into different river systems.

WDFW – Washington State Department of Fish and Wildlife.

WDNR – Washington State Department of Natural Resources.

Wetland – An area where anaerobic conditions (lack of oxygen) develop in the soil because of prolonged saturation or inundation by water during the growing season. Indicators of wetlands include plant species adapted to such conditions, characteristic soil colors and chemical properties, and physical evidence of flooding or waterlogged soils.

WRIA – Water Resource Inventory Areas are administrative and planning boundaries developed and managed by the Washington State Department of Ecology.

WSDOT – Washington State Department of Transportation.